

What is claimed is:

1. A navigation device for vehicle comprising:

map data providing means for reading map data from a recording medium;

5 pre-reading process means for receiving a destination, detecting a current position of a vehicle, determining a route from the current position of the vehicle to the destination according to the map data provided from the map data providing means, setting an area of a first map corresponding to a first part of the route placed in a first type of road to a first range in a pre-reading process and setting an area of a map corresponding to a second part of the route placed in a second type of road to a second range in the pre-reading process on condition that the
10 second range of the area of the second map is narrower than the first range of the area of the second map;

15 data storing means for storing both first map data, which corresponds to the first map area set by the pre-reading process means and is provided from the map data providing means, and second map data, which corresponds to the second map area set by the pre-reading process means and is provided from the map data providing means, in the pre-reading process; and

20 guiding means for guiding the vehicle to take the route to the destination according to both the first map and the second map which are indicated by both the first map data and the second map data stored in the data storing means.

2. A navigation device for vehicle according to claim 1,
30 wherein the pre-reading process means comprises

road attribute checking means for receiving the map data of a map area, which is partitioned into a plurality of map units and includes both the first type of road, to which a road attribute indicating the first type of road is attached, and the second type of road to which a road attribute indicating the second type of road is attached, from the map data providing means, partitioning the route placed on both the first type of road and the second type of road into a plurality of route links respectively included in one of the map units so as to attach the road attribute indicating the first type of road or the road attribute indicating the second type of road to each route link, checking whether the road attribute attached to each route link indicates the first type of road or the second type of road, specifying a first remarked map unit including each first remarked route link and one or a plurality of map units placed near to the first remarked map unit in cases where the road attribute attached to the first remarked route link indicates the first type of road, specifying a second remarked map unit including each second remarked route link in cases where the road attribute attached to the second remarked route link indicates the second type of road, controlling the data storing means to store data of the first remarked map units and data of the map units placed near to the first remarked map units as the first map data and controlling the data storing means to store data of the second remarked map units and data of the map units placed near to the second remarked map units as the second map data.

3. A navigation device for vehicle according to claim 2, wherein the first type of road denotes a general road other than a throughway, and the second type of road denotes a throughway.

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4. A navigation device for vehicle according to claim 3, wherein one or a plurality of map units placed near to one second remarked map unit are specified by the road attribute checking means in cases where a junction exists in the second remarked map unit, and the data storing means is controlled by the road attribute checking means to additionally store data of the map units placed near to the second remarked map unit as the second map data.

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5. A navigation device for vehicle according to claim 2, wherein a second pre-reading process is performed by the road attribute checking means to specify one or a plurality of additional map units placed near to the map units which are placed near to the first remarked map unit or the second remarked map unit, and the data storing means is controlled by the road attribute checking means to additionally store data of the additional map units.

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6. A navigation device for vehicle according to claim 1, wherein the map data providing means is formed of a communication unit, connected with an internet, for downloading the map data from an external server and providing the map data for the pre-reading process means and the data storing means.

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